

NMCP COVID-19 Literature Report #62: Friday, 05 March 2021

Prepared By: Tracy C. Shields, MSIS, AHIP <tracy.c.shields2.civ@mail.mil>

Naval Medical Center Portsmouth; Library Services, Reference Medical Librarian

Purpose: These weekly reports, published on Fridays, are curated collections of current research, evidence reviews, special reports, grey literature, and news regarding the COVID-19 pandemic that may be of interest to medical providers, leadership, and decision makers.

All reports are available online at <https://nmcp.libguides.com/covidreport>. Access is private; you will need to use the direct link or bookmark the URL, along with the case-sensitive password "NMCPfinest".

Disclaimer: I am not a medical professional. This document is current as of the date noted above. While I make every effort to find and summarize available data, I cannot cover everything in the literature on COVID-19. Please feel free to reach out with questions, suggestions for future topics, or any other feedback.

Statistics

Global today: 115,760,047 confirmed cases and 2,571,789 deaths in 192 countries/regions

26 FEB 2021: 113,111,157 confirmed cases and 2,510,125 deaths in 192 countries/regions

19 FEB 2021: 110,439,431 confirmed cases and 2,444,329 deaths in 192 countries/regions

United States*

top 5 states by cases

	TOTAL US	CA	TX	FL	NY	IL
Cases	28,828,292	3,587,567	2,683,386	1,930,386	1,670,716	1,193,177
Deaths	520,387	53,466	44,757	31,387	48,049	22,902

*see census.gov for current US Population data; NA: not all data available

[JHU CSSE](#) as of 1000 EDT 05 March 2021

Virginia is ranked 17th in cases and 18th in deaths.

	Total (state)	Chesapeake	Hampton	Newport News	Norfolk	Portsmouth	Suffolk	Virginia Beach
Cases	583,060	18,446	8,768	11,688	15,079	7,789	6,995	31,010
Hospitalizations	24,514	858	301	318	828	589	400	1,308
Deaths	9,428	226	127	190	209	149	163	330

[VA DOH](#) as of 1000 EDT 05 March 2021

Calls and Webinars

TOPIC: [CADTH COVID-19 Webinar - Women's Issues in Pandemic Times: How COVID-19 Has Exacerbated Gender Inequities for Women in Canada and Around the World](#)

"Despite progress in women's issues in recent decades, there is concern that the COVID-19 pandemic has accentuated existing disparities, causing a reversion to traditional gender roles and adversely affecting the health of many women in Canada, with possible long-lasting physical, psychological, social, and economic effects. This talk will explore the mechanisms that lead to inequity and specifically how the COVID 19 pandemic has exacerbated gender inequality. The speakers will assess specific examples of gender inequity during COVID-19 in Canada and globally. They will also strategize on effective advocacy interventions that take into account gender-specific considerations and thereby foster gender equity during COVID-19 pandemic management and recovery."

WHEN: Monday, 08 March 2021, 1130–1230 ET

REGISTER: <https://cadth.ca/events/cadth-covid-19-webinar-womens-issues-pandemic-times-how-covid-19-has-exacerbated-gender>

TOPIC: [CDC COCA: The Role of Telehealth in Expanding Access to Healthcare During the COVID-19 Pandemic: Considerations for Vaccine Uptake and Monitoring for Adverse Events](#)

"During this COCA call, presenters will discuss the role of telehealth in increasing access to healthcare during the COVID-19 pandemic and how telehealth can augment COVID-19 vaccine planning in healthcare facilities. Presenters will provide a summary of a recent series of discussions with the telemedicine community. Presenters will also share their experiences using telehealth tools for triaging and navigating patients, reaching low access communities, managing infectious and chronic illnesses, disseminating COVID-19 vaccine information, and monitoring for COVID-19 vaccine adverse events."

WHEN: Thursday, 11 March 2021, 1400–1500 ET

<https://www.zoomgov.com/j/1600341756?pwd=N2JKc3pOcW1lSGdtWUJQVkrjREt0dz09>

Special Reports

FAIR Health: [The Impact of COVID-19 on Pediatric Mental Health \[pdf\]](#) (published 02 March 2021)

"The COVID-19 pandemic has had a profound impact on mental health, particularly on that of young people. Defining the pediatric population as individuals aged 0-22 years, and focusing on the age groups 13-18 years and 19-22 years, FAIR Health studied the effects of the pandemic on US pediatric mental health. To do so, FAIR Health analyzed data from its database of over 32 billion private healthcare claim records, tracking month-by-month changes from January to November 2020 compared to the same months in 2019. Aspects of pediatric mental health investigated include overall mental health, intentional self-harm, overdoses and substance use disorders, top mental health diagnoses, reasons for emergency room visits and state-by-state variations. Among the key findings:

Overall Mental Health

- In March and April 2020, mental health claim lines for individuals aged 13-18, as a percentage of all medical claim lines, approximately doubled over the same months in the previous year. All medical claim lines (including mental health claim lines), however, decreased by approximately half. That pattern of increased mental health claim lines and decreased medical claim lines continued through November 2020, though to a lesser extent.
- A similar pattern was seen for individuals aged 19-22, though the changes were smaller. In general, the age group 19-22 had mental health trends similar to but less pronounced than the age group 13-18.

Intentional Self-Harm

- Claim lines for intentional self-harm as a percentage of all medical claim lines in the 13-18 age group increased 90.71 percent in March 2020 compared to March 2019. The increase was even larger when comparing April 2020 to April 2019, nearly doubling (99.83 percent).
- Comparing August 2019 to August 2020 in the Northeast, for the age group 13-18, there was a 333.93 percent increase in intentional self-harm claim lines as a percentage of all medical claim lines, a rate higher than that in any other region in any month studied for that age group.

Overdoses and Substance Use Disorders

- For the age group 13-18, claim lines for overdoses increased 94.91 percent as a percentage of all medical claim lines in March 2020 and 119.31 percent in April 2020 over the same months the year before. Claim lines for substance use disorders also

increased as a percentage of all medical claim lines in March (64.64 percent) and April (62.69 percent) 2020 as compared to their corresponding months in 2019.

Mental Health Diagnoses

- For the age group 6-12, from spring to November 2020, claim lines for obsessive-compulsive disorder and tic disorders increased as a percentage of all medical claim lines from their levels in the corresponding months of 2019.
- For the age group 13-18, in April 2020, claim lines for generalized anxiety disorder increased 93.6 percent as a percentage of all medical claim lines over April 2019, while major depressive disorder claim lines increased 83.9 percent and adjustment disorder claim lines 89.7 percent."

Insecurity Insight: [Threats and Violence against Health Care during the COVID-19 Pandemic in 2020 \[pdf\]](#) (published March 2021)

"Monitoring by Insecurity Insight has identified 412 attacks on health care related to the COVID-19 pandemic between January and December 2020. Health workers were abused, injured, threatened and harassed, and health facilities were attacked, damaged and/or set on fire in these incidents. The incidents referred to in this report are unlikely to be a complete record of all incidents that affected health care in 2020....

In most COVID-19-related incidents abuse or violence was triggered by people opposing health measures intended to contain the spread of the virus. Health workers also faced abuse or violence while travelling to and from work, and for speaking out against difficulties they experienced in their work, including the lack of PPE."

Selected Literature: Peer-Reviewed Journals

Date given is the date published or posted online; often these papers are ahead of print.

05 March 2021

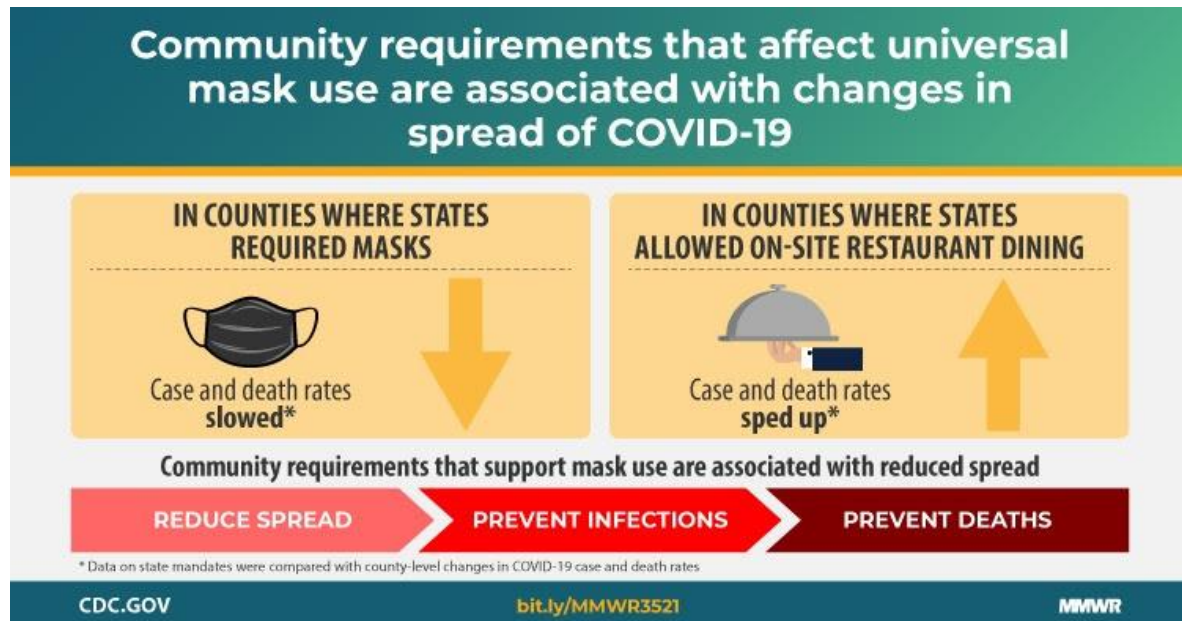
MMWR: [Association of State-Issued Mask Mandates and Allowing On-Premises Restaurant Dining with County-Level COVID-19 Case and Death Growth Rates — United States, March 1–December 31, 2020](#)

"What is already known about this topic? Universal masking and avoiding nonessential indoor spaces are recommended to mitigate the spread of COVID-19.

What is added by this report? Mandating masks was associated with a decrease in daily COVID-19 case and death growth rates within 20 days of implementation. Allowing on-

premises restaurant dining was associated with an increase in daily COVID-19 case growth rates 41–100 days after implementation and an increase in daily death growth rates 61–100 days after implementation.

What are the implications for public health practice? Mask mandates and restricting any on-premises dining at restaurants can help limit community transmission of COVID-19 and reduce case and death growth rates. These findings can inform public policies to reduce community spread of COVID-19."



{PHOTO}

MMWR: [Estimated SARS-CoV-2 Seroprevalence Among Persons Aged <18 Years — Mississippi, May–September 2020](#)

"What is already known about the topic? Serosurveys estimating prior SARS-CoV-2 infections in the United States have focused on adults; little is known about seroprevalence among young persons.

What is added by this report? Serologic testing of residual blood specimens collected during May–September 2020, from 1,603 persons aged <18 years suggested that approximately 113,842 (16.3%) of 698,420 young persons in Mississippi might have been infected with SARS-CoV-2 by mid-September 2020, and only 8,993 confirmed and probable COVID-19 cases among young persons had been reported to the Mississippi State Department of Health by August 31.

What are the implications for public health practice? Serosurveys including pediatric age groups help estimate cumulative disease incidence and frequency of undiagnosed cases of COVID-19 among young persons to guide prevention efforts."

04 March 2021

JAMA: [Effect of Ivermectin on Time to Resolution of Symptoms Among Adults With Mild COVID-19: A Randomized Clinical Trial](#)

"Question: What is the effect of ivermectin on duration of symptoms in adults with mild COVID-19?

Findings: In this randomized clinical trial that included 476 patients, the duration of symptoms was not significantly different for patients who received a 5-day course of ivermectin compared with placebo (median time to resolution of symptoms, 10 vs 12 days; hazard ratio for resolution of symptoms, 1.07).

Meaning: The findings do not support the use of ivermectin for treatment of mild COVID-19, although larger trials may be needed to understand effects on other clinically relevant outcomes."

JAMA Cardiol: [Prevalence of Inflammatory Heart Disease Among Professional Athletes With Prior COVID-19 Infection Who Received Systematic Return-to-Play Cardiac Screening](#)

"Question: What is the prevalence of inflammatory heart disease identified through implementation of recent return-to-play (RTP) cardiac screening recommendations in professional athletes with prior coronavirus disease 2019 (COVID-19) infection?

Findings: In this cross-sectional study of RTP cardiac testing performed on 789 professional athletes with COVID-19 infection, imaging evidence of inflammatory heart disease that resulted in restriction from play was identified in 5 athletes (0.6%). No adverse cardiac events occurred in the athletes who underwent cardiac screening and resumed professional sport participation.

Meaning: Using expert consensus RTP screening recommendations for athletes testing positive for COVID-19, few cases of inflammatory heart disease were detected and safe return to professional sport activity has thus far been achieved."

JAMA Ophthalmology: [Frequency of Urgent or Emergent Vitreoretinal Surgical Procedures in the United States During the COVID-19 Pandemic](#)

"Question: What was the nationwide association of the coronavirus disease 2019 (COVID-19) pandemic with the frequency of vitreoretinal surgical procedures determined as urgent or emergent by the American Academy of Ophthalmology?

Findings: In this cross-sectional study of 526 536 procedures across 17 institutions, there was a significant decrease in the use of lasers and cryotherapy, retinal detachment repairs, and other vitrectomies, beginning mid-March 2020 and sustaining at least until May 2020. Reductions were independent of region, practice setting, and state-level stay-at-home orders.

Meaning: This study suggests that critical vitreoretinal surgical procedures deemed as urgent or emergent experienced a decrease nationwide that persisted early through the COVID-19 pandemic, warranting ophthalmology practices to prioritize availability safely until explanations for the decrease are fully understood."

03 March 2021

Disaster Med Public Health Prep: [A topic analysis of traditional and social media news coverage of the early COVID-19 pandemic and implications for public health communication](#)

"To characterize and compare early coverage of COVID-19 in newspapers, television, and social media, and discuss implications for public health communication strategies that are relevant to an initial pandemic response.

Latent Dirichlet Allocation (LDA), an unsupervised topic modelling technique, analysis of 3,271 newspaper articles, 40 cable news shows transcripts, 96,000 Twitter posts, and 1,000 Reddit posts during March 4 - 12, 2020, a period chronologically early in the timeframe of the COVID-19 pandemic.

Coverage of COVID-19 clustered on topics such as epidemic, politics, and the economy, and these varied across media sources. Topics dominating news were not predominantly health-related, suggesting a limited presence of public health in news coverage in traditional and social media. Examples of misinformation were identified particularly in social media.

Public health entities should utilize communication specialists to create engaging informational content to be shared on social media sites. Public health officials should be attuned to their target audience to anticipate and prevent spread of common myths likely to exist within a population. This may help control misinformation in early stages of pandemics."

JAMA: [Filtering Facepiece Respirator \(N95 Respirator\) Reprocessing: A Systematic Review](#)

"Question: What methods of filtering facepiece respirator decontamination are effective and feasible?

Findings: Five decontamination processes and 42 studies were reviewed. Ultraviolet germicidal irradiation, moist heat, and microwave-generated steam processing were

effective for pathogen removal, preserved respirator filtration, and had short treatment times and readily available equipment. Vaporized hydrogen peroxide is a suitable alternative with longer decontamination durations and is more expensive. Ethylene oxide may leave toxic residues and is less easily implemented.

Meaning: Ultraviolet germicidal irradiation, moist heat, and microwave-generated steam processing of filtering facepiece respirators are effective means for decontamination and are simple to implement."

MMWR: [First Identified Cases of SARS-CoV-2 Variant P.1 in the United States — Minnesota, January 2021](#)

"As of February 28, 2021, a total of 10 P.1 cases had been identified in the United States, including the two cases described in this report, followed by one case each in Alaska, Florida, Maryland, and Oklahoma.... The two travel-associated cases of the SARS-CoV-2 variant P.1 in Minnesota represent the first identified occurrences of this variant in the United States."

MMWR: [Travel from the United Kingdom to the United States by a Symptomatic Patient Infected with the SARS-CoV-2 B.1.1.7 Variant — Texas, January 2021](#)

"This case demonstrates how a variant of concern, in this case B.1.1.7, might be translocated between communities through travel."

NEJM: [Delayed Large Local Reactions to mRNA-1273 Vaccine against SARS-CoV-2](#)

"A small number of Moderna COVID-19 vaccine recipients experienced delayed, large, localized skin irritations at the point of injection, according to a letter published yesterday in the *New England Journal of Medicine*. While the symptoms cleared up in a median of 8 days, the researchers want to make sure clinicians are aware of this side effect and can navigate appropriate treatment and vaccine guidance.

The letter details these delayed skin reactions in 12 people, 4 of whom didn't have any allergy history.

Injection-site characteristics included hypersensitivity, redness, and itchiness, and the affected area could be up to 10 centimeters (4 inches) in diameter (see photo at right, used with permission of Massachusetts General Hospital). Some concurrent systemic conditions also occurred, such as high blood pressure, fatigue, additional rashes, and fever. Median onset was day 8 post-vaccination (range, 4 to 11) and the reactions cleared in a median of 6 days.

Most patients were treated with ice and antihistamines, although some required corticosteroids. Upon the second vaccine dose, 6 of the patients didn't have any delayed injection-site reactions, 3 had the same level, and 3 had lower levels.

"Whether you've experienced a rash at the injection site right away or this delayed skin reaction, neither condition should prevent you from getting the second dose of the vaccine," says lead author Kimberly Blumenthal, MD, MSc, in a Massachusetts General Hospital press release. "Our immediate goal is to make physicians and other care providers aware of this possible delayed reaction, so they are not alarmed, but instead well-informed and equipped to advise their patients accordingly."

In Moderna's phase 3 clinical trial involving more than 30,000 patients published Dec 30, 2020, immediate injection-site reactions were observed in 84.2% of vaccine recipients and delayed-on-site reaction (on or after day 8 post-vaccination) was observed in 0.2%. In these delayed reactions, symptoms usually resolved in 4 to 5 days." ([summary from CIDRAP](#))

Science: [Estimated transmissibility and impact of SARS-CoV-2 lineage B.1.1.7 in England](#)

"A novel SARS-CoV-2 variant, VOC 202012/01 (lineage B.1.1.7), emerged in southeast England in November 2020 and is rapidly spreading toward fixation. Using a variety of statistical and dynamic modelling approaches, we estimate that this variant has a 43–90% (range of 95% credible intervals 38–130%) higher reproduction number than preexisting variants. A fitted two-strain dynamic transmission model shows that VOC 202012/01 will lead to large resurgences of COVID-19 cases. Without stringent control measures, including limited closure of educational institutions and a greatly accelerated vaccine roll-out, COVID-19 hospitalisations and deaths across England in 2021 will exceed those in 2020. Concerningly, VOC 202012/01 has spread globally and exhibits a similar transmission increase (59–74%) in Denmark, Switzerland, and the United States."

02 March 2021

Ann Intern Med: [Retail Alcohol and Tobacco Sales During COVID-19](#)

"Retail alcohol and tobacco sales increased 34% and 13%, respectively, early during the COVID-19 pandemic compared with the same period in the year prior. The greater increase in alcohol sales unlikely reflects bar and restaurant closures alone because alcohol sales increased more (+34.4%) than nonalcoholic beverage sales (+17.7%) or total sales by a non-alcohol purchaser (+2.6%). Previous estimates were that 22% growth of off-premise alcohol sales would be needed to fully offset on-premise losses from closures—in our analysis, alcohol sales increased 34%.

Alcohol and tobacco purchases increased in all geographic and almost all demographic categories. Relative increases were higher in the same demographic subgroups reported to have increased stress and anxiety during the pandemic. However, aggregated data limit conclusions regarding individual consumption patterns and whether increases are due to increased drinking versus purchases for other uses (such as baking and cooking)."

MMWR: [The Advisory Committee on Immunization Practices' Interim Recommendation for Use of Janssen COVID-19 Vaccine — United States, February 2021](#)

"What is already known about this topic? On February 27, 2021, the Food and Drug Administration issued an Emergency Use Authorization (EUA) for the Janssen COVID-19 vaccine.

What is added by this report? On February 28, 2021, after a transparent evidence-based review of all available data, the Advisory Committee on Immunization Practices (ACIP) issued an interim recommendation for use of the Janssen COVID-19 vaccine in persons aged ≥ 18 years for the prevention of COVID-19.

What are the implications for public health practice? The Janssen COVID-19 vaccine has high efficacy against COVID-19–associated hospitalization and death. Persons may receive any ACIP-recommended COVID-19 vaccine and are encouraged to receive the earliest vaccine available to them. Use of all EUA-authorized COVID-19 vaccines is critical in controlling the pandemic."

Pediatr Res: [COVID-19: trainee perspectives from unprecedented changes on the Paediatric Intensive Care Unit \(PICU\)](#)

"During the coronavirus disease 2019 (COVID-19) global pandemic, there has been a need to develop surge capacity. Since the disease is uncommon in children, working on a paediatric intensive care unit (PICU) has required an expansion of roles and responsibilities outside established confines. The most drastic change in practice involved having to care for both critically ill adults and children side by side on the PICU. Redeployment to work on an adult critical care unit as required was similarly momentous. Based on our experience of managing this surge in one of the UK's worst hit tertiary hospitals, we are sharing our reproducible approaches that benefitted trainees. This will be relevant to paediatricians globally who are assisting in critical care strategies and future pandemic planning."

01 March 2021

Eur J Epidemiol: [COVID-19 vaccine acceptance among pregnant women and mothers of young children: results of a survey in 16 countries](#)

"With the development of multiple effective vaccines, reducing the global morbidity and mortality of COVID-19 will depend on the distribution and acceptance of COVID-19 vaccination. Estimates of global vaccine acceptance among pregnant women and mothers of young children are yet unknown. An understanding of the challenges and correlates to vaccine acceptance will aid the acceleration of vaccine administration within these populations. Acceptance of COVID-19 vaccination among pregnant women and mothers of

children younger than 18-years-old, as well as potential predictors, were assessed through an online survey, administered by Pregistry between October 28 and November 18, 2020. 17,871 total survey responses from 16 countries were obtained. Given a 90% COVID-19 vaccine efficacy, 52.0% of pregnant women (n = 2747/5282) and 73.4% of non-pregnant women (n = 9214/12,562) indicated an intention to receive the vaccine. 69.2% of women (n = 11,800/17,054), both pregnant and non-pregnant, indicated an intention to vaccinate their children. Vaccine acceptance was generally highest in India, the Philippines, and all sampled countries in Latin America; it was lowest in Russia, the United States and Australia. The strongest predictors of vaccine acceptance included confidence in vaccine safety or effectiveness, worrying about COVID-19, belief in the importance of vaccines to their own country, compliance to mask guidelines, trust of public health agencies/health science, as well as attitudes towards routine vaccines. COVID-19 vaccine acceptance and its predictors among women vary globally. Vaccination campaigns for women and children should be specific for each country in order to attain the largest impact."

JAMA: [Binding and Neutralization Antibody Titers After a Single Vaccine Dose in Health Care Workers Previously Infected With SARS-CoV-2](#)

"This study compares titers of binding and neutralizing antibodies after a single mRNA coronavirus vaccine dose in health care workers previously infected with SARS-CoV-2."

28 February 2021

Clin Pharmacol Ther: [Systematic review and patient-level meta-analysis of SARS-CoV-2 viral dynamics to model response to antiviral therapies](#)

"SARS-CoV-2 viral loads change rapidly following symptom onset so to assess antivirals it is important to understand the natural history and patient factors influencing this. We undertook an individual patient-level meta-analysis of SARS-CoV-2 viral dynamics in humans to describe viral dynamics and estimate the effects of antivirals used to-date. This systematic review identified case reports, case series and clinical trial data from publications between 1/1/2020 and 31/5/2020 following PRISMA guidelines. A multivariable Cox proportional hazards regression model (Cox-PH) of time to viral clearance was fitted to respiratory and stool samples. A simplified four parameter nonlinear mixed-effects (NLME) model was fitted to viral load trajectories in all sampling sites and covariate modelling of respiratory viral dynamics was performed to quantify time dependent drug effects. Patient-level data from 645 individuals (age 1 month-100 years) with 6316 viral loads were extracted. Model-based simulations of viral load trajectories in samples from the upper and lower respiratory tract, stool, blood, urine, ocular secretions and breast milk were generated. Cox-PH modelling showed longer time to viral clearance in older patients, males and those with more severe disease. Remdesivir was associated with faster viral

clearance (adjusted hazard ratio (AHR) = 9.19, $p < 0.001$), as well as interferon, particularly when combined with ribavirin (AHR = 2.2, $p = 0.015$; AHR = 6.04, $p = 0.006$). Combination therapy should be further investigated. A viral dynamic dataset and NLME model for designing and analysing antiviral trials has been established."

26 February 2021

Clin Infect Dis: [Changes in SARS CoV-2 Seroprevalence Over Time in Ten Sites in the United States, March – August, 2020](#)

"We performed serologic testing on a convenience sample of residual sera obtained from persons of all ages, at ten sites in the United States from March 23 through August 14, 2020, from routine clinical testing at commercial laboratories. We age-sex-standardized our seroprevalence rates using census population projections and adjusted for laboratory assay performance. Confidence intervals were generated with a two-stage bootstrap. We used Bayesian modeling to test whether seroprevalence changes over time were statistically significant.

Seroprevalence remained below 10% at all sites except New York and Florida, where it reached 23.2% and 13.3%, respectively. Statistically significant increases in seroprevalence followed peaks in reported cases in New York, South Florida, Utah, Missouri and Louisiana. In the absence of such peaks, some significant decreases were observed over time in New York, Missouri, Utah, and Western Washington. The estimated cumulative number of infections with detectable antibody response continued to exceed reported cases in all sites.

Estimated seroprevalence was low in most sites, indicating that most people in the U.S. have not been infected with SARS-CoV-2 as of July 2020. The majority of infections are likely not reported. Decreases in seroprevalence may be related to changes in healthcare-seeking behavior, or evidence of waning of detectable anti-SARS CoV-2 antibody levels at the population level. Thus, seroprevalence estimates may underestimate the cumulative incidence of infection."

JAMA: [Association of Convalescent Plasma Treatment With Clinical Outcomes in Patients With COVID-19: A Systematic Review and Meta-analysis](#)

"Question: Is treatment with convalescent plasma associated with improved clinical outcomes?

Findings: In a meta-analysis of 4 peer-reviewed and published randomized clinical trials including 1060 patients with COVID-19 treated with convalescent plasma vs control, the risk ratio for mortality was 0.93 and after the addition of 6 unpublished randomized clinical

trials and 10 722 patients, the risk ratio for mortality was 1.02; neither finding was statistically significant. No significant associations with benefit were shown for hospital length of stay, mechanical ventilation use, clinical improvement, or clinical deterioration.

Meaning: Among patients with COVID-19, treatment with convalescent plasma compared with control was not associated with improved survival or other positive clinical outcomes."

JAMA Netw Open: [Household Transmission of SARS-CoV-2](#)

"This cohort study assesses the risk of household transmission of SARS-CoV-2 and the associated risk factors among exposed household members."

Nat Commun: [Association between antecedent statin use and decreased mortality in hospitalized patients with COVID-19](#)

"The coronavirus disease 2019 (COVID-19) can result in a hyperinflammatory state, leading to acute respiratory distress syndrome (ARDS), myocardial injury, and thrombotic complications, among other sequelae. Statins, which are known to have anti-inflammatory and antithrombotic properties, have been studied in the setting of other viral infections, but their benefit has not been assessed in COVID-19. This is a retrospective analysis of patients admitted with COVID-19 from February 1st through May 12th, 2020 with study period ending on June 11th, 2020. Antecedent statin use was assessed using medication information available in the electronic medical record. We constructed a multivariable logistic regression model to predict the propensity of receiving statins, adjusting for baseline sociodemographic and clinical characteristics, and outpatient medications. The primary endpoint includes in-hospital mortality within 30 days. A total of 2626 patients were admitted during the study period, of whom 951 (36.2%) were antecedent statin users. Among 1296 patients (648 statin users, 648 non-statin users) identified with 1:1 propensity-score matching, statin use is significantly associated with lower odds of the primary endpoint in the propensity-matched cohort (OR 0.47, 95% CI 0.36–0.62, $p < 0.001$). We conclude that antecedent statin use in patients hospitalized with COVID-19 is associated with lower inpatient mortality."

25 February 2021

EClinicalMedicine: [Estimating risk of mechanical ventilation and in-hospital mortality among adult COVID-19 patients admitted to Mass General Brigham: The VICE and DICE scores](#)

"We established a retrospective cohort of COVID-19 patients from Mass General Brigham hospitals. Demographic, clinical, and admission laboratory data were obtained from electronic medical records of patients admitted to the hospital with laboratory-confirmed COVID-19 before May 19, 2020. Multivariable logistic regression analyses were used to

construct and validate the Ventilation in COVID Estimator (VICE) and Death in COVID Estimator (DICE) risk scores.

The entire cohort included 1042 patients (median age, 64 years; 56.8% male). The derivation and validation cohorts for the risk scores included 578 and 464 patients, respectively. We found four factors to be independently predictive for mechanical ventilation requirement (diabetes mellitus, SpO₂:FiO₂ ratio, C-reactive protein, and lactate dehydrogenase), and 10 factors to be predictors of in-hospital mortality (age, male sex, coronary artery disease, diabetes mellitus, chronic statin use, SpO₂:FiO₂ ratio, body mass index, neutrophil to lymphocyte ratio, platelet count, and procalcitonin). Using these factors, we constructed the VICE and DICE risk scores, which performed with C-statistics of 0.84 and 0.91, respectively. Importantly, the chronic use of a statin was associated with protection against death due to COVID-19. The VICE and DICE score calculators have been placed on an interactive website freely available to healthcare providers and researchers (<https://covid-calculator.com/>).

The risk scores developed in this study may help clinicians more appropriately determine which COVID-19 patients will need to be managed with greater intensity."

JAMA Otolaryngol Head Neck Surg: [Otolaryngologic Manifestations in Pediatric Inflammatory Multisystem Syndrome Temporally Associated With COVID-19](#)

"This cohort study describes the various otolaryngologic manifestations in and rates among patients 18 years or younger with pediatric inflammatory multisystem syndrome temporally associated with severe acute respiratory syndrome coronavirus 2."

Lancet: [Effect of previous SARS-CoV-2 infection on humoral and T-cell responses to single-dose BNT162b2 vaccine](#)

"In summary, we show that individuals with previous SARS-CoV-2 infection generate strong humoral and cellular responses to one dose of BNT162b2 vaccine, with evidence of high titres of in-vitro live virus neutralisation. In contrast, most individuals who are infection-naïve generate both weak T-cell responses and low titres of neutralising antibodies."

NEJM: [Interleukin-6 Receptor Antagonists in Critically Ill Patients with Covid-19](#)

"We evaluated tocilizumab and sarilumab in an ongoing international, multifactorial, adaptive platform trial. Adult patients with Covid-19, within 24 hours after starting organ support in the intensive care unit (ICU), were randomly assigned to receive tocilizumab (8 mg per kilogram of body weight), sarilumab (400 mg), or standard care (control). The primary outcome was respiratory and cardiovascular organ support-free days, on an ordinal scale combining in-hospital death (assigned a value of -1) and days free of organ support to day 21. The trial uses a Bayesian statistical model with predefined criteria for superiority,

efficacy, equivalence, or futility. An odds ratio greater than 1 represented improved survival, more organ support-free days, or both.

Both tocilizumab and sarilumab met the predefined criteria for efficacy. At that time, 353 patients had been assigned to tocilizumab, 48 to sarilumab, and 402 to control. The median number of organ support-free days was 10 (interquartile range, -1 to 16) in the tocilizumab group, 11 (interquartile range, 0 to 16) in the sarilumab group, and 0 (interquartile range, -1 to 15) in the control group. The median adjusted cumulative odds ratios were 1.64 (95% credible interval, 1.25 to 2.14) for tocilizumab and 1.76 (95% credible interval, 1.17 to 2.91) for sarilumab as compared with control, yielding posterior probabilities of superiority to control of more than 99.9% and of 99.5%, respectively. An analysis of 90-day survival showed improved survival in the pooled interleukin-6 receptor antagonist groups, yielding a hazard ratio for the comparison with the control group of 1.61 (95% credible interval, 1.25 to 2.08) and a posterior probability of superiority of more than 99.9%. All secondary analyses supported efficacy of these interleukin-6 receptor antagonists.

In critically ill patients with Covid-19 receiving organ support in ICUs, treatment with the interleukin-6 receptor antagonists tocilizumab and sarilumab improved outcomes, including survival."

NEJM: [Tocilizumab in Hospitalized Patients with Severe Covid-19 Pneumonia](#)

"In this phase 3 trial, we randomly assigned patients who were hospitalized with severe Covid-19 pneumonia in a 2:1 ratio receive a single intravenous infusion of tocilizumab (at a dose of 8 mg per kilogram of body weight) or placebo. Approximately one quarter of the participants received a second dose of tocilizumab or placebo 8 to 24 hours after the first dose. The primary outcome was clinical status at day 28 on an ordinal scale ranging from 1 (discharged or ready for discharge) to 7 (death) in the modified intention-to-treat population, which included all the patients who had received at least one dose of tocilizumab or placebo.

Of the 452 patients who underwent randomization, 438 (294 in the tocilizumab group and 144 in the placebo group) were included in the primary and secondary analyses. The median value for clinical status on the ordinal scale at day 28 was 1.0 (95% confidence interval [CI], 1.0 to 1.0) in the tocilizumab group and 2.0 (non-ICU hospitalization without supplemental oxygen) (95% CI, 1.0 to 4.0) in the placebo group (between-group difference, -1.0; 95% CI, -2.5 to 0; $P=0.31$ by the van Elteren test). In the safety population, serious adverse events occurred in 103 of 295 patients (34.9%) in the tocilizumab group and in 55 of 143 patients (38.5%) in the placebo group. Mortality at day 28 was 19.7% in the tocilizumab group and 19.4% in the placebo group (weighted difference, 0.3 percentage points (95% CI, -7.6 to 8.2; nominal $P=0.94$).

In this randomized trial involving hospitalized patients with severe Covid-19 pneumonia, the use of tocilizumab did not result in significantly better clinical status or lower mortality than placebo at 28 days."

Sci Rep: [Airborne dispersion of droplets during coughing: a physical model of viral transmission](#)

"The Covid-19 pandemic has focused attention on airborne transmission of viruses. Using realistic air flow simulation, we model droplet dispersion from coughing and study the transmission risk related to SARS-CoV-2. Although this model defines most airborne droplets as 8–16 μm in diameter, we infer that larger droplets of 32–40 μm in diameter may potentially be more infectious due to higher viral content. Use of face masks is therefore recommended for both personal and social protection. We found social distancing effective at reducing transmission potential across all droplet sizes. However, the presence of a human body 1 m away modifies the aerodynamics so that downstream droplet dispersion is enhanced, which has implications on safe distancing in queues. At 1 m distance, we found that an average of 0.55 viral copies is inhaled for a cough at median loading, scalable up to 340 copies at peak loading. Droplet evaporation results in significant reduction in droplet counts, but airborne transmission remains possible even under low humidity conditions."

24 February 2021

J Cosmet Dermatol: [COVID-19 and Human Papillomavirus: Paradoxical immunity](#)

"Coronavirus disease 2019 (COVID-19) is a multisystemic disease that can cause progressive lung failure, organ dysfunction and coagulation disorder associated with high mortality and morbidity. COVID-19 is known to either primarily cause skin symptoms or increase existing skin diseases. Human papillomavirus (HPV) is a DNA virus that can cause benign and malignant neoplasms. Mucocutaneous verruca vulgaris are common benign lesions of HPV. Here, we report a case of verruca vulgaris regressed after COVID-19."

23 February 2021

BMC Med: [Following the science? Comparison of methodological and reporting quality of covid-19 and other research from the first wave of the pandemic](#)

"Following the initial identification of the 2019 coronavirus disease (covid-19), the subsequent months saw substantial increases in published biomedical research. Concerns have been raised in both scientific and lay press around the quality of some of this research. We assessed clinical research from major clinical journals, comparing methodological and reporting quality of covid-19 papers published in the first wave (here defined as December

2019 to May 2020 inclusive) of the viral pandemic with non-covid papers published at the same time.

We reviewed research publications (print and online) from *The BMJ*, *Journal of the American Medical Association (JAMA)*, *The Lancet*, and *New England Journal of Medicine*, from first publication of a covid-19 research paper (February 2020) to May 2020 inclusive. Paired reviewers were randomly allocated to extract data on methodological quality (risk of bias) and reporting quality (adherence to reporting guidance) from each paper using validated assessment tools. A random 10% of papers were assessed by a third, independent rater. Overall methodological quality for each paper was rated high, low or unclear. Reporting quality was described as percentage of total items reported.

From 168 research papers, 165 were eligible, including 54 (33%) papers with a covid-19 focus. For methodological quality, 18 (33%) covid-19 papers and 83 (73%) non-covid papers were rated as low risk of bias, OR 6.32 (95%CI 2.85 to 14.00). The difference in quality was maintained after adjusting for publication date, results, funding, study design, journal and raters (OR 6.09 (95%CI 2.09 to 17.72)). For reporting quality, adherence to reporting guidelines was poorer for covid-19 papers, mean percentage of total items reported 72% (95%CI:66 to 77) for covid-19 papers and 84% (95%CI:81 to 87) for non-covid.

Across various measures, we have demonstrated that covid-19 research from the first wave of the pandemic was potentially of lower quality than contemporaneous non-covid research. While some differences may be an inevitable consequence of conducting research during a viral pandemic, poor reporting should not be accepted."

20 February 2021

Pharmacol Rep: [In-hospital use of statins is associated with a reduced risk of mortality in coronavirus-2019 \(COVID-19\): systematic review and meta-analysis](#)

"The idea of treating COVID-19 with statins is biologically plausible, although it is still controversial. The systematic review and meta-analysis aimed to address the association between the use of statins and risk of mortality in patients with COVID-19.

Several electronic databases, including PubMed, SCOPUS, EuropePMC, and the Cochrane Central Register of Controlled Trials, with relevant keywords up to 11 November 2020, were used to perform a systematic literature search. This study included research papers containing samples of adult COVID-19 patients who had data on statin use and recorded mortality as their outcome of interest. Risk estimates of mortality in statin users versus non-statin users were pooled across studies using inverse-variance weighted DerSimonian-Laird random-effect models.

Thirteen studies with a total of 52,122 patients were included in the final qualitative and quantitative analysis. Eight studies reported in-hospital use of statins; meanwhile, the remaining studies reported pre-admission use of statins. In-hospital use of statin was associated with a reduced risk of mortality (RR 0.54, 95% CI 0.50–0.58, $p < 0.00001$; I²: 0%, $p = 0.87$), while pre-admission use of statin was not associated with mortality (RR 1.18, 95% CI 0.79–1.77, $p = 0.415$; I²: 68.6%, $p = 0.013$). The funnel plot for the association between the use of statins and mortality were asymmetrical.

This meta-analysis showed that in-hospital use of statins was associated with a reduced risk of mortality in patients with COVID-19."

ICYMI (older than the last 2 weeks)

Cell Res: [Coinfection with influenza A virus enhances SARS-CoV-2 infectivity](#) (18 February 2021)

"The upcoming flu season in the Northern Hemisphere merging with the current COVID-19 pandemic raises a potentially severe threat to public health. Through experimental coinfection with influenza A virus (IAV) and either pseudotyped or live SARS-CoV-2 virus, we found that IAV preinfection significantly promoted the infectivity of SARS-CoV-2 in a broad range of cell types. Remarkably, in vivo, increased SARS-CoV-2 viral load and more severe lung damage were observed in mice coinfecting with IAV. Moreover, such enhancement of SARS-CoV-2 infectivity was not observed with several other respiratory viruses, likely due to a unique feature of IAV to elevate ACE2 expression. This study illustrates that IAV has a unique ability to aggravate SARS-CoV-2 infection, and thus, prevention of IAV infection is of great significance during the COVID-19 pandemic."

Rheumatol Int: [SARS-CoV-2 vaccines and autoimmune diseases amidst the COVID-19 crisis](#) (published online 30 January 2021)

"Coronavirus disease 2019 (COVID-19) pandemic has become challenging even for the most durable healthcare systems. It seems that vaccination, one of the most effective public-health interventions, presents a ray of hope to end the pandemic by achieving herd immunity. In this review, we aimed to cover aspects of the current knowledge of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) vaccines and vaccine candidates in the light of autoimmune inflammatory diseases (AIDs) and to analyze their potential in terms of safety and effectiveness in patients with AIDs. Therefore, a focused narrative review was carried out to predict the possible implications of different types of SARS-CoV-2 vaccines which confer distinct immune mechanisms to establish immune response and protection against COVID-19: whole virus (inactivated or weakened), viral vector (replicating and non-replicating), nucleic acid (RNA, DNA), and protein-based (protein subunit, virus-like particle). Still, there is uncertainty among patients with AIDs and clinicians about the

effectiveness and safety of the new vaccines. There are a variety of approaches towards building a protective immunity against SARS-CoV-2. Only high-quality clinical trials would clarify the underlying immunological mechanisms of the newly implemented vaccines/adjuvants in patients living with AIDs."

Selected Literature: Preprints

Preprints are found on preprint servers such as [arXiv](#), [bioRxiv](#), and [medRxiv](#); they are commonly used for biomedical research. Preprints may later be published in peer-reviewed journals. Per medRxiv: "Preprints are preliminary reports of work that have not been certified by peer review. They should not be relied on to guide clinical practice or health-related behavior and should not be reported in news media as established information."

SSRN: [Assessing the Effectiveness of BNT162b2 and ChAdOx1nCoV-19 COVID-19 Vaccination in Prevention of Hospitalisations in Elderly and Frail Adults: A Single Centre Test Negative Case-Control Study](#) (posted 03 March 2021)

"Background: On 8th December 2020, deployment of the first vaccine against SARS-CoV-2 authorised for UK use, the mRNA-based vaccine BNT162b2, began, followed by the adenoviral vector vaccine ChAdOx1nCoV-19 on 4th January 2021. Initially care home-residents and staff, frontline healthcare workers and adults from age 80 were targeted. In phase 3 trials, BNT162b2 and ChAdOx1nCoV-19 demonstrated 95% and 70% efficacy, respectively, after two doses against symptomatic SARS-CoV-2 infection. However, few data exist regarding the effectiveness of these vaccines in elderly frail people. Evaluation following implementation to determine the effectiveness of one dose in reducing hospitalisations due to SARS-CoV-2 infection in elderly adults is urgent.

Methods: A prospective single-centre test-negative design case-control study of adults aged ≥ 80 years hospitalised with COVID-19 disease or other acute respiratory disease. We conducted logistic regression controlling for time (week), gender, index of multiple deprivations (IMD), and care residency status (CRS), and sensitivity analyses matched for time and gender using a conditional logistic model adjusting for IMD and CRS.

Findings: First dose vaccine effectiveness of BNT162b2 was 71.4% (95% confidence interval [CI] 46.5-90.6). ChAdOx1nCoV-19 first dose vaccine effectiveness was 80.4% (95% CI 36.4-94.5). When effectiveness analysis for BNT162b2 was restricted to the period covered by ChAdOx1nCoV-19, the estimate was 79.3% (95% CI 47.0-92.5).

Interpretation: A single dose of either BNT162b2 or ChAdOx1nCoV-19 vaccine resulted in substantial reductions in the risk of COVID-19-related hospitalisation in elderly, frail patients with extensive co-morbid disease."

medRxiv: [SARS-CoV-2 antibodies detected in human breast milk post-vaccination](#) (posted 02 March 2021)

"Importance: The SARS-CoV-2 pandemic has infected over a hundred million people worldwide, with almost 2.5 million deaths at the date of this publication. In the United States, Pfizer-BioNTech and Moderna vaccines were first administered to the public starting in December 2020, and no lactating women were included in the initial trials of safety/efficacy. Research on SARS-CoV-2 vaccination in lactating women and the potential transmission of passive immunity to the infant through breast milk is needed to guide patients, clinicians and policy makers during the worldwide effort to curb the spread of this virus.

Objective: To determine whether SARS-CoV-2 specific immunoglobins are found in breast milk post-vaccination, and to characterize the time course and types of immunoglobulins present.

Design: Prospective cohort study Setting: Providence Portland Medical Center, Oregon, USA Participants: Six lactating women who planned to receive both doses of the Pfizer-BioNTech or Moderna vaccine between December 2020 and January 2021. Breast milk samples were collected pre-vaccination and at 11 additional timepoints, with last sample at 14 days post 2nd dose of vaccine. Exposure: Two doses of Pfizer-BioNTech or Moderna SARS-CoV-2 vaccine. Main Outcome(s) and Measure(s): Levels of SARS-CoV-2 specific IgA and IgG immunoglobulins in breast milk.

Results: In this cohort of 6 lactating women who received 2 doses of SARS-CoV-2 vaccine, we observed significantly elevated levels of SARS-CoV-2 specific IgG and IgA antibodies in breast milk beginning at Day 7 after the initial vaccine dose, with an IgG-dominant response.

Conclusions and Relevance: We are the first to show that maternal vaccination results in SARS-CoV-2 specific immunoglobulins in breast milk that may be protective for infants."

bioRxiv: [CD47 as a potential biomarker for the early diagnosis of severe COVID-19](#) (posted 01 March 2021)

"The coronavirus SARS-CoV-2 is the cause of the ongoing COVID-19 pandemic. Most SARS-CoV-2 infections are mild or even asymptomatic. However, a small fraction of infected individuals develops severe, life-threatening disease, which is caused by an uncontrolled immune response resulting in hyperinflammation. Antiviral interventions are only effective prior to the onset of hyperinflammation. Hence, biomarkers are needed for the early identification and treatment of high-risk patients. Here, we show in a range of model

systems and data from post mortem samples that SARS-CoV-2 infection results in increased levels of CD47, which is known to mediate immune escape in cancer and virus-infected cells. Systematic literature searches also indicated that known risk factors such as older age and diabetes are associated with increased CD47 levels. High CD47 levels contribute to vascular disease, vasoconstriction, and hypertension, conditions which may predispose SARS-CoV-2-infected individuals to COVID-19-related complications such as pulmonary hypertension, lung fibrosis, myocardial injury, stroke, and acute kidney injury. Hence, CD47 is a candidate biomarker for severe COVID-19. Further research will have to show whether CD47 is a reliable diagnostic marker for the early identification of COVID-19 patients requiring antiviral therapy."

bioRxiv: [Reduced antibody cross-reactivity following infection with B.1.1.7 than with parental SARS-CoV-2 strains](#) (posted 01 March 2021)

"We examined the immunogenicity of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) variant B.1.1.7 that arose in the United Kingdom and spread globally. Antibodies elicited by B.1.1.7 infection exhibited significantly reduced recognition and neutralisation of parental strains or of the South Africa B.1.351 variant, than of the infecting variant. The drop in cross-reactivity was more pronounced following B.1.1.7 than parental strain infection, indicating asymmetric heterotypic immunity induced by SARS-CoV-2 variants."

medRxiv: [Risk factors for illness severity among pregnant women with confirmed SARS-CoV-2 infection - Surveillance for Emerging Threats to Mothers and Babies Network, 20 state, local, and territorial health departments, March 29, 2020 -January 8, 2021](#) (posted 01 March 2021)

"Background: Pregnant women with coronavirus disease 2019 (COVID-19) are at increased risk for severe illness compared with nonpregnant women. Data to assess risk factors for illness severity among pregnant women with COVID-19 are limited. This study aimed to determine risk factors associated with COVID-19 illness severity among pregnant women with SARS-CoV-2 infection.

Methods: Pregnant women with SARS-CoV-2 infection confirmed by molecular testing were reported during March 29, 2020-January 8, 2021 through the Surveillance for Emerging Threats to Mothers and Babies Network (SET-NET). Criteria for illness severity (asymptomatic, mild, moderate-to-severe, or critical) were adapted from National Institutes of Health and World Health Organization criteria. Crude and adjusted risk ratios for moderate-to-severe or critical COVID-19 illness were calculated for selected demographic and clinical characteristics.

Results: Among 5,963 pregnant women with SARS-CoV-2 infection, moderate-to-severe or critical COVID-19 illness was associated with age 30-39 years, Black/Non-Hispanic race/ethnicity, healthcare occupation, pre-pregnancy obesity, chronic lung disease, chronic

hypertension, cardiovascular disease, pregestational diabetes mellitus or gestational diabetes. Risk of moderate-to-severe or critical illness increased with the number of underlying medical or pregnancy-related conditions.

Conclusions: Pregnant women with moderate-to-severe or critical COVID-19 illness were more likely to be older and have underlying medical conditions compared to pregnant women with asymptomatic infection or mild COVID-19 illness. This information might help pregnant women understand their risk for moderate-to-severe or critical COVID-19 illness and inform targeted public health messaging."

medRxiv: [Real-time analysis of a mass vaccination effort confirms the safety of FDA-authorized mRNA vaccines for COVID-19 from Moderna and Pfizer/BioNtech](#) (posted 27 February 2021)

"As the COVID-19 vaccination campaign unfolds as one of the most rapid and widespread in history, it is important to continuously assess the real-world safety of the FDA-authorized vaccines. Curation from large-scale electronic health records (EHRs) allows for near real-time safety evaluations that were not previously possible. Here, we advance context- and sentiment-aware deep neural networks over the multi-state Mayo Clinic enterprise (Minnesota, Arizona, Florida, Wisconsin) for automatically curating the adverse effects mentioned by healthcare providers in over 108,000 EHR clinical notes between December 1st 2020 and February 8th 2021. We retrospectively compared the clinical notes of 31,029 individuals who received at least one dose of the Pfizer/BioNTech or Moderna mRNA vaccine to those of 30,933 unvaccinated individuals who were propensity matched by demographics, residential location, and history of prior SARS-CoV-2 testing. We find that vaccinated and unvaccinated individuals were seen in the clinic at similar rates within 21 days of the first or second actual or assigned vaccination date (first dose Odds Ratio = 1.14, 95% CI: 1.10-1.18; second dose Odds Ratio = 0.91, 95% CI: 0.86-0.96). Further, the incidence rates of all surveyed adverse effects were similar or lower in vaccinated individuals compared to unvaccinated individuals after either vaccine dose, although myalgia was modestly increased within 7 days of the second dose when considering only pairs of matched individuals who each had at least one clinical note in this time window (Incidence Rate Ratio = 2.5, 95% CI: 1.1-6.7). Finally, the most frequently documented adverse effects within 7 days of each vaccine dose were fatigue (Dose 1: 1.75%, Dose 2: 1.18%), nausea (Dose 1: 1.03%, Dose 2: 0.84%), myalgia (Dose 1: 0.41%; Dose 2: 0.43%), diarrhea (Dose 1: 0.65%; Dose 2: 0.45%), arthralgia (Dose 1: 0.64%; Dose 2: 0.57%), erythema (Dose 1: 0.56%; Dose 2: 0.44%), vomiting (Dose 1: 0.44%, Dose 2: 0.29%) and fever (Dose 1: 0.21%; Dose 2: 0.18%). These frequencies of adverse event documentation in EHR notes are 2.1 times (95% CI: [1.5, 3.0]) to 1500 times (95% CI: [670, 2800]) lower than the frequencies of adverse events recorded via active solicitation during clinical trials or post-marketing surveillance, with headache after second vaccination showing the highest ratio of trial reporting to EHR documentation. This rapid and timely analysis of EHR notes from 31,029 vaccinated

individuals highlights the rarity of vaccine-associated adverse effects requiring clinical attention and reaffirms the tolerability of the FDA-authorized COVID-19 vaccines in practice."

Authorea: [Single-dose BNT162b2 vaccine protects against asymptomatic SARS-CoV-2 infection](#) (posted 24 February 2021)

"Here, we evaluate the effect of first-dose BNT162b2 vaccination on test positivity rates and cycle threshold (Ct) values in the asymptomatic arm of our programme, which now offers weekly screening to all staff.... We therefore provide real-world evidence for a high level of protection against asymptomatic SARS-CoV-2 infection after a single dose of BNT162b2 vaccine, at a time of predominant transmission of the UK COVID-19 variant of concern 202012/01 (lineage B.1.1.7), and amongst a population with a relatively low frequency of prior infection (7.2% antibody positive)."

News in Brief

In a briefing on Monday, WHO officials said it was 'premature' and 'unrealistic' to think the pandemic might be over by the end of the year ([AP](#)).

"The short-term, middle-term, and long-term future of the coronavirus" ([STAT](#)).

The New Variants

There a new COVID variant, known as B.1.1.318, in the UK; 16 cases have already been detected ([Reuters](#)).

Apparently, it's possible to be infected by two different variants at the same time ([medRxiv](#)).

Vaccines

The FDA issued an EUA for the Johnson & Johnson / Janssen coronavirus vaccine, making it the third vaccine available ([FDA](#)).

Some Catholic bishops are raising concerns about the J&J vaccine because it was made using abortion-derived cells ([WashPo](#)).

The one-shot J&J vaccine doesn't need to be frozen, making it appealing to use in harder-to-reach areas with marginalized communities. But those features may give rise to perceptions of racial and geographic disparities ([WashPo](#)).

Meanwhile, the FDA says the Pfizer-BioNTech vaccine can have more flexible storage, which may help with distribution ([FDA](#)).

Novavax is aiming for a May submission to the FDA for their coronavirus vaccine ([Fierce Biotech](#)).

"1 simple way to understand how effective the Covid-19 vaccines are: All of the Covid-19 vaccines are more effective than your annual flu shot" ([Vox](#)).

Well, except if they are fake: Interpol says fake coronavirus vaccines have been smuggled across continents; "'[t]his is only the tip of the iceberg when it comes to COVID-19 vaccine related crime,' said Jürgen Stock, the agency's secretary general" ([Time](#)).

That has led to some serious vaccine security measures, like kill switches, panic buttons, and electronic monitoring, that seem more appropriate for movies ([Businessweek](#)).

Vaccines – Who's Getting Them?

We will have enough COVID-19 vaccine for every adult in the US by May ([Reuters](#)).

"Dissent. Deliberation. Distrust. Indifference. Vaccine hesitancy is not one thing. It's a portfolio. And we're going to need a portfolio of strategies to solve it" ([Atlantic](#)).

Think of the Queen and get a covid shot ([Reuters](#)).

Orangutans and bonobos at the San Diego Zoo are some of the first great apes to get a COVID-19 vaccine ([NatGeo](#)).

Statistics and Research Data

The NIH has closed enrollment 2 sub-studies of the ACTIV-3 trial looking at monoclonal antibodies, citing that interim analysis showed no benefit ([NIH](#)).

"Inside 'post-Covid' clinics: How specialized centers are trying to treat long-haulers" ([NBC](#)).

Minnesota health officials are looking into 'vaccine breakthrough cases' and have confirmed 14 cases already ([WCCO](#); warning, automatic play video).

The COVID Tracking Project is coming to an end this week ([COVID Tracking](#)).

Thanks, Coronavirus

"We're having trouble recognizing each other in masks, and it's getting awkward" ([WashPo](#)).

Remember how we had shortages of everything from toilet paper to exercise equipment early in the pandemic? Well, there are still problems with getting supplies for manufacturing ([NPR](#)).

It's possible that frozen wildlife may harbor SARS-CoV2 ([Nature](#)).

Dr. Fauci donated his personal model of the SARS-CoV-2 virion to the Smithsonian ([NPR](#)).

Long Reads

"How inequity gets built into America's vaccination system" ([ProPublica](#)).

"5 pandemic mistakes we keep repeating: The assumptions made by public officials, and the choices made by media, too often backfired" ([Atlantic](#)).

"The search for animals harbouring coronavirus — and why it matters: Scientists are monitoring pets, livestock and wildlife to work out where SARS-CoV-2 could hide, and whether it could resurge" ([Nature](#)).

"The truth-tellers: China created a story of the pandemic. These people revealed details Beijing left out" ([CNN](#); highly interactive, may not work on NMCP network with Menlo Security settings).

Other Outbreaks and Infectious Diseases

There has been only one pediatric death from the influenza this season ([CDC](#)).

More Ebola cases have been confirmed in the DRC and Guinea ([Reuters](#)).

The Saudi Ministry of Health reported a new case of MERS in Riyadh ([CIDRAP](#)).

El Salvador is now malaria free, according to the WHO; it is the first Central American country to achieve this status ([WHO](#)).

In what either could be nightmare fuel or (fingers crossed) horrible, 'oh please let this be just bad timing' coincidence, the CDC updated their "zombie preparedness" page last week ([CDC](#)).

And Now for Something Completely Different – Hello, Dolly!



Dolly Parton, who helped fund the Moderna vaccine with a \$1 million donation to Vanderbilt University, got her first shot of it earlier this week ([NPR](#)).

She posted the moment on [Twitter](#) – "Dolly gets a dose of her own medicine" – and added a special touch by singing

"Vaccine, vaccine, vaccine, vaccine /
I'm begging of you please don't hesitate /
vaccine, vaccine, vaccine, vaccine /
'cause once you're dead then that's a bit too late"
to the tune of [Jolene](#).

← Original image source unknown, but it was taken at the 'Saint Dolly' Mardi Gras house float at 5200 St. Charles Ave, New Orleans ([NOLA](#)).

References

Statistics

JHU CSSE: Johns Hopkins Center for Systems Science and Engineering. Coronavirus COVID-19 Global Cases. Link: <https://coronavirus.jhu.edu/map.html>

VA DOH: Virginia Department of Health. COVID-19 in Virginia. Link: <http://www.vdh.virginia.gov/coronavirus/>

Special Reports

FAIR Health: Fair Health. White paper: The Impact of COVID-19 on Pediatric Mental Health [pdf] (published 02 March 2021). Link:

<https://s3.amazonaws.com/media2.fairhealth.org/whitepaper/asset/The%20Impact%20of%20COVID-19%20on%20Pediatric%20Mental%20Health%20-%20A%20Study%20of%20Private%20Healthcare%20Claims%20-%20A%20FAIR%20Health%20White%20Paper.pdf>

Insecurity Insight: Insecurity Insight, the Researching the Impact of Attacks on Healthcare project (RIAH) and the Safeguarding Health in Conflict Coalition (SHCC). Threats and Violence against Health Care during the COVID-19 Pandemic in 2020 [pdf] (published March 2021). Link: <http://insecurityinsight.org/wp-content/uploads/2021/02/Violence-against-health-care-during-the-COVID-19-pandemic-in-2020-March-2021.pdf>

Selected Literature: Peer-Reviewed Journals

Ann Intern Med: Lee BP, Dodge JL, Leventhal A, Terrault NA. Retail Alcohol and Tobacco Sales During COVID-19. Ann Intern Med. 2021 Mar 2. doi: 10.7326/M20-7271. Epub ahead of print. PMID: 33646843. Link: <https://www.acpjournals.org/doi/10.7326/M20-7271>

BMC Med: Quinn TJ, Burton JK, Carter B, Cooper N, Dwan K, Field R, Freeman SC, Geue C, Hsieh PH, McGill K, Nevill CR, Rana D, Sutton A, Rowan MT, Xin Y. Following the science? Comparison of methodological and reporting quality of covid-19 and other research from the first wave of the pandemic. BMC Med. 2021 Feb 23;19(1):46. doi: 10.1186/s12916-021-01920-x. PMID: 33618741; PMCID: PMC7899793. Link: <https://bmcmecine.biomedcentral.com/articles/10.1186/s12916-021-01920-x>

Cell Res: Bai L, Zhao Y, Dong J, Liang S, Guo M, Liu X, Wang X, Huang Z, Sun X, Zhang Z, Dong L, Liu Q, Zheng Y, Niu D, Xiang M, Song K, Ye J, Zheng W, Tang Z, Tang M, Zhou Y, Shen C, Dai M, Zhou L, Chen Y, Yan H, Lan K, Xu K. Coinfection with influenza A virus enhances SARS-CoV-2 infectivity. Cell Res. 2021 Feb 18:1–9. doi: 10.1038/s41422-021-00473-1. Epub ahead of print.

NMCP COVID-19 Literature Report #62: Friday, 05 March 2021
Tracy C. Shields, MSIS, AHIP (Reference Medical Librarian at NMCP, Library Services)

PMID: 33603116; PMCID: PMC7890106. Link: <https://www.nature.com/articles/s41422-021-00473-1>

Clin Infect Dis: Lim T, Delorey M, Bestul N, Johannsen M, Reed C, Hall AJ, Fry AM, Edens C, Semenova V, Li H, Browning P, Desai R, Epperson M, Jia T, Thornburg NJ, Schiffer J, Havers FP. Changes in SARS CoV-2 Seroprevalence Over Time in Ten Sites in the United States, March - August, 2020. Clin Infect Dis. 2021 Feb 26:ciab185. doi: 10.1093/cid/ciab185. Epub ahead of print. PMID: 33639620. Link: <https://academic.oup.com/cid/advance-article/doi/10.1093/cid/ciab185/6152134>

Clin Pharmacol Ther: Gastine S, Pang J, Boshier FAT, Carter SJ, Lonsdale DO, Cortina-Borja M, Hung IFN, Breuer J, Klopogge F, Standing JF. Systematic review and patient-level meta-analysis of SARS-CoV-2 viral dynamics to model response to antiviral therapies. Clin Pharmacol Ther. 2021 Feb 28. doi: 10.1002/cpt.2223. Epub ahead of print. PMID: 33641159. Link: <https://ascpt.onlinelibrary.wiley.com/doi/10.1002/cpt.2223>

Disaster Med Public Health Prep: Chipidza W, Akbaripourdibazar E, Gwanzura T, Gatto NM. A topic analysis of traditional and social media news coverage of the early COVID-19 pandemic and implications for public health communication. Disaster Med Public Health Prep. 2021 Mar 3:1-23. doi: 10.1017/dmp.2021.65. Epub ahead of print. PMID: 33653437. Link: <https://www.cambridge.org/core/journals/disaster-medicine-and-public-health-preparedness/article/topic-analysis-of-traditional-and-social-media-news-coverage-of-the-early-covid19-pandemic-and-implications-for-public-health-communication/1C68A82E93755E3AEE5926A04CA78ABC>

EClinicalMedicine: Nicholson CJ, Wooster L, Sigurslid HH, et al. Estimating risk of mechanical ventilation and in-hospital mortality among adult COVID-19 patients admitted to Mass General Brigham: The VICE and DICE scores. EClinicalMedicine. Available online 25 February 2021. <https://doi.org/10.1016/j.eclinm.2021.100765> Link: <https://www.sciencedirect.com/science/article/pii/S2589537021000456>

Eur J Epidemiol: Skjefte M, Ngirbabul M, Akeju O, Escudero D, Hernandez-Diaz S, Wyszynski DF, Wu JW. COVID-19 vaccine acceptance among pregnant women and mothers of young children: results of a survey in 16 countries. Eur J Epidemiol. 2021 Mar 1. doi: 10.1007/s10654-021-00728-6. Epub ahead of print. PMID: 33649879. Link: <https://link.springer.com/article/10.1007/s10654-021-00728-6>

J Cosmet Dermatol: Demirbaş A, Eker H, Elmas ÖF, Ulutaş Demirbaş G, Atasoy M, Türsen Ü, Lotti T. COVID-19 and Human Papillomavirus: Paradoxical immunity. J Cosmet Dermatol. 2021 Feb 24. doi: 10.1111/jocd.14022. Epub ahead of print. PMID: 33626241. Link: <https://onlinelibrary.wiley.com/doi/10.1111/jocd.14022>

JAMA: Janiaud P, Axfors C, Schmitt AM, Gloy V, Ebrahimi F, Hepprich M, Smith ER, Haber NA, Khanna N, Moher D, Goodman SN, Ioannidis JPA, Hemkens LG. Association of Convalescent Plasma Treatment With Clinical Outcomes in Patients With COVID-19: A Systematic Review and Meta-analysis. JAMA. 2021 Feb 26. doi: 10.1001/jama.2021.2747. Epub ahead of print. PMID: 33635310. Link: <https://jamanetwork.com/journals/jama/fullarticle/2777060>

JAMA: Lopez-Medina E, Lopez P, Hurtado IC, et al. Effect of Ivermectin on Time to Resolution of Symptoms Among Adults With Mild COVID-19: A Randomized Clinical Trial. JAMA. Published online March 4, 2021. doi:10.1001/jama.2021.3071 Link: <https://jamanetwork.com/journals/jama/fullarticle/2777389>

JAMA: Saadat S, Tehrani ZR, Logue J, Newman M, Frieman MB, Harris AD, Sajadi MM. Binding and Neutralization Antibody Titers After a Single Vaccine Dose in Health Care Workers Previously Infected With SARS-CoV-2. JAMA. 2021 Mar 1. doi: 10.1001/jama.2021.3341. Epub ahead of print. PMID: 33646292. Link: <https://jamanetwork.com/journals/jama/fullarticle/2777171>

JAMA: Schumm MA, Hadaya JE, Mody N, Myers BA, Maggard-Gibbons M. Filtering Facepiece Respirator (N95 Respirator) Reprocessing: A Systematic Review. JAMA. 2021 Mar 3. doi: 10.1001/jama.2021.2531. Epub ahead of print. PMID: 33656543. Link: <https://jamanetwork.com/journals/jama/fullarticle/2777342>

JAMA Cardiol: Martinez MW, Tucker AM, Bloom OJ, et al. Prevalence of Inflammatory Heart Disease Among Professional Athletes With Prior COVID-19 Infection Who Received Systematic Return-to-Play Cardiac Screening. JAMA Cardiol. Published online March 4, 2021. doi:10.1001/jamacardio.2021.0565 Link: <https://jamanetwork.com/journals/jamacardiology/fullarticle/2777308>

JAMA Netw Open: Metlay JP, Haas JS, Soltoff AE, Armstrong KA. Household Transmission of SARS-CoV-2. JAMA Netw Open. 2021 Feb 1;4(2):e210304. doi: 10.1001/jamanetworkopen.2021.0304. PMID: 33635324. Link: <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2776908>

JAMA Ophthalmology: Breazzano MP, Nair AA, Arevalo JF, et al. Frequency of Urgent or Emergent Vitreoretinal Surgical Procedures in the United States During the COVID-19 Pandemic. JAMA Ophthalmol. Published online March 4, 2021. doi:10.1001/jamaophthalmol.2021.0036 Link: <https://jamanetwork.com/journals/jamaophthalmology/fullarticle/2777180>

JAMA Otolaryngol Head Neck Surg: Cheong RCT, Jephson C, Frauenfelder C, Cavalli L, Moshal K, Butler CR, Wyatt ME. Otolaryngologic Manifestations in Pediatric Inflammatory Multisystem Syndrome Temporally Associated With COVID-19. JAMA Otolaryngol Head Neck Surg. 2021 Feb 25. doi: 10.1001/jamaoto.2020.5698. Epub ahead of print. PMID: 33630068. Link: <https://jamanetwork.com/journals/jamaotolaryngology/fullarticle/2776919>

Lancet: Prendecki M, Clarke C, Brown J, Cox A, Gleeson S, Guckian M, Randell P, Pria AD, Lightstone L, Xu XN, Barclay W, McAdoo SP, Kelleher P, Willicombe M. Effect of previous SARS-CoV-2 infection on humoral and T-cell responses to single-dose BNT162b2 vaccine. Lancet. 2021 Feb 25;S0140-6736(21)00502-X. doi: 10.1016/S0140-6736(21)00502-X. Epub ahead of print. PMID: 33640037. Link: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(21\)00502-X/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00502-X/fulltext)

MMWR: Firestone MJ, Lorentz AJ, Meyer S, et al. First Identified Cases of SARS-CoV-2 Variant P.1 in the United States — Minnesota, January 2021. MMWR Morb Mortal Wkly Rep. ePub: 3 March 2021. DOI: <http://dx.doi.org/10.15585/mmwr.mm7010e1> Link: <https://www.cdc.gov/mmwr/volumes/70/wr/mm7010e1.htm>

MMWR: Guy GP Jr., Lee FC, Sunshine G, et al. Association of State-Issued Mask Mandates and Allowing On-Premises Restaurant Dining with County-Level COVID-19 Case and Death Growth Rates — United States, March 1–December 31, 2020. MMWR Morb Mortal Wkly Rep. ePub: 5 March 2021. DOI: <http://dx.doi.org/10.15585/mmwr.mm7010e3> Link: <https://www.cdc.gov/mmwr/volumes/70/wr/mm7010e3.htm>

MMWR: Hobbs CV, Drobeniuc J, Kittle T, et al. Estimated SARS-CoV-2 Seroprevalence Among Persons Aged <18 Years — Mississippi, May–September 2020. MMWR Morb Mortal Wkly Rep 2021;70:312–315. DOI: <http://dx.doi.org/10.15585/mmwr.7009a4> Link: <https://www.cdc.gov/mmwr/volumes/70/wr/mm7009a4.htm>

MMWR: Ojelade M, Rodriguez A, Gonzalez D, et al. Travel from the United Kingdom to the United States by a Symptomatic Patient Infected with the SARS-CoV-2 B.1.1.7 Variant — Texas, January 2021. MMWR Morb Mortal Wkly Rep. ePub: 3 March 2021. DOI: <http://dx.doi.org/10.15585/mmwr.mm7010e2> Link: <https://www.cdc.gov/mmwr/volumes/70/wr/mm7010e2.htm>

MMWR: Oliver SE, Gargano JW, Scobie H, et al. The Advisory Committee on Immunization Practices' Interim Recommendation for Use of Janssen COVID-19 Vaccine — United States, February 2021. MMWR Morb Mortal Wkly Rep. ePub: 2 March 2021. DOI: <http://dx.doi.org/10.15585/mmwr.mm7009e4> Link: <https://www.cdc.gov/mmwr/volumes/70/wr/mm7009e4.htm>

Nat Commun: Gupta A, Madhavan MV, Poterucha TJ, DeFilippis EM, Hennessey JA, Redfors B, Eckhardt C, Bikdeli B, Platt J, Nalbandian A, Elias P, Cummings MJ, Nouri SN, Lawlor M, Ranard LS, Li J, Boyle C, Givens R, Brodie D, Krumholz HM, Stone GW, Sethi SS, Burkhoof D, Uriel N, Schwartz A, Leon MB, Kirtane AJ, Wan EY, Parikh SA. Association between antecedent statin use and decreased mortality in hospitalized patients with COVID-19. Nat Commun. 2021 Feb 26;12(1):1325. doi: 10.1038/s41467-021-21553-1. PMID: 33637713. Link: <https://www.nature.com/articles/s41467-021-21553-1>

NEJM: Blumenthal KG, Freeman EE, Saff RR, Robinson LB, Wolfson AR, Foreman RK, Hashimoto D, Banerji A, Li L, Anvari S, Shenoy ES. Delayed Large Local Reactions to mRNA-1273 Vaccine against SARS-CoV-2. *N Engl J Med*. 2021 Mar 3. doi: 10.1056/NEJMc2102131. Epub ahead of print. PMID: 33657292. Link: <https://www.nejm.org/doi/full/10.1056/NEJMc2102131>

NEJM: REMAP-CAP Investigators, Gordon AC, Mouncey PR, Al-Beidh F, Rowan KM, Nichol AD, Arabi YM, Annane D, Beane A, van Bentum-Puijk W, Berry LR, Bhimani Z, Bonten MJM, Bradbury CA, Brunkhorst FM, Buzgau A, Cheng AC, Detry MA, Duffy EJ, Estcourt LJ, Fitzgerald M, Goossens H, Haniffa R, Higgins AM, Hills TE, Horvat CM, Lamontagne F, Lawler PR, Leavis HL, Linstrum KM, Litton E, Lorenzi E, Marshall JC, Mayr FB, McAuley DF, McGlothlin A, McGuinness SP, McVerry BJ, Montgomery SK, Morpeth SC, Murthy S, Orr K, Parke RL, Parker JC, Patanwala AE, Pettilä V, Rademaker E, Santos MS, Saunders CT, Seymour CW, Shankar-Hari M, Sligl WI, Turgeon AF, Turner AM, van de Veerdonk FL, Zarychanski R, Green C, Lewis RJ, Angus DC, McArthur CJ, Berry S, Webb SA, Derde LPG. Interleukin-6 Receptor Antagonists in Critically Ill Patients with Covid-19. *N Engl J Med*. 2021 Feb 25. doi: 10.1056/NEJMoa2100433. Epub ahead of print. PMID: 33631065. Link: <https://www.nejm.org/doi/full/10.1056/NEJMoa2100433>

NEJM: Rosas IO, Bräu N, Waters M, Go RC, Hunter BD, Bhagani S, Skiest D, Aziz MS, Cooper N, Douglas IS, Savic S, Youngstein T, Del Sorbo L, Cubillo Gracian A, De La Zerda DJ, Ustianowski A, Bao M, Dimonaco S, Graham E, Matharu B, Spotswood H, Tsai L, Malhotra A. Tocilizumab in Hospitalized Patients with Severe Covid-19 Pneumonia. *N Engl J Med*. 2021 Feb 25. doi: 10.1056/NEJMoa2028700. Epub ahead of print. PMID: 33631066. Link: <https://www.nejm.org/doi/full/10.1056/NEJMoa2028700>

Pediatr Res: Siva N, Knight P, Deep A. COVID-19: trainee perspectives from unprecedented changes on the Paediatric Intensive Care Unit (PICU). *Pediatr Res*. 2021 Mar 2:1–2. doi: 10.1038/s41390-021-01418-5. Epub ahead of print. PMID: 33654275; PMCID: PMC7922710. Link: <https://www.nature.com/articles/s41390-021-01418-5>

Pharmacol Rep: Permana H, Huang I, Purwiga A, Kusumawardhani NY, Sihite TA, Martanto E, Wisaksana R, Soetedjo NNM. In-hospital use of statins is associated with a reduced risk of mortality in coronavirus-2019 (COVID-19): systematic review and meta-analysis. *Pharmacol Rep*. 2021 Feb 20:1–12. doi: 10.1007/s43440-021-00233-3. Epub ahead of print. PMID: 33608850; PMCID: PMC7895740. Link: <https://link.springer.com/article/10.1007%2Fs43440-021-00233-3>

Rheumatol Int: Velikova T, Georgiev T. SARS-CoV-2 vaccines and autoimmune diseases amidst the COVID-19 crisis. *Rheumatol Int*. 2021 Mar;41(3):509-518. doi: 10.1007/s00296-021-04792-9. Epub 2021 Jan 30. PMID: 33515320; PMCID: PMC7846902. Link: <https://link.springer.com/article/10.1007%2Fs00296-021-04792-9>

Sci Rep: Li H, Leong FY, Xu G, Kang CW, Lim KH, Tan BH, Loo CM. Airborne dispersion of droplets during coughing: a physical model of viral transmission. *Sci Rep*. 2021 Feb 25;11(1):4617. doi:

10.1038/s41598-021-84245-2. PMID: 33633316; PMCID: PMC7907382. Link:

<https://www.nature.com/articles/s41598-021-84245-2>

Science: Davies NG, Abbott S, Barnard RC, Jarvis CI, Kucharski AJ, Munday JD, Pearson CAB, Russell TW, Tully DC, Washburne AD, Wenseleers T, Gimma A, Waite W, Wong KLM, van Zandvoort K, Silverman JD; CMMID COVID-19 Working Group; COVID-19 Genomics UK (COG-UK) Consortium, Diaz-Ordaz K, Keogh R, Eggo RM, Funk S, Jit M, Atkins KE, Edmunds WJ. Estimated transmissibility and impact of SARS-CoV-2 lineage B.1.1.7 in England. Science. 2021 Mar 3:eabg3055. doi: 10.1126/science.abg3055. Epub ahead of print. PMID: 33658326. Link: <https://science.sciencemag.org/content/early/2021/03/03/science.abg3055>

Selected Literature: Preprints

Authorea: Weekes M, Jones NK, Rivett L, et al. Single-dose BNT162b2 vaccine protects against asymptomatic SARS-CoV-2 infection (posted 24 February 2021). Available on Authorea. Link: <https://www.authorea.com/users/332778/articles/509881-single-dose-bnt162b2-vaccine-protects-against-asymptomatic-sars-cov-2-infection>

bioRxiv: Faulkner N, Ng K, Wu M, et al. Reduced antibody cross-reactivity following infection with B.1.1.7 than with parental SARS-CoV-2 strains (posted 01 March 2021). bioRxiv 2021.03.01.433314; doi: <https://doi.org/10.1101/2021.03.01.433314> Link: <https://www.biorxiv.org/content/10.1101/2021.03.01.433314v1>

bioRxiv: McLaughlin K-M, Bojkova D, Bechtel M, et al. CD47 as a potential biomarker for the early diagnosis of severe COVID-19 (posted 01 March 2021). bioRxiv 2021.03.01.433404; doi: <https://doi.org/10.1101/2021.03.01.433404> Link: <https://www.biorxiv.org/content/10.1101/2021.03.01.433404v1>

medRxiv: Baird JK, Jensen SM, Urba WJ, Fox BA, Baird JR. SARS-CoV-2 antibodies detected in human breast milk post-vaccination posted 02 March 2021). medRxiv 2021.02.23.21252328; doi: <https://doi.org/10.1101/2021.02.23.21252328> Link: <https://www.medrxiv.org/content/10.1101/2021.02.23.21252328v1>

medRxiv: Galang RR, Newton SM, Woodworth KR, et al. Risk factors for illness severity among pregnant women with confirmed SARS-CoV-2 infection - Surveillance for Emerging Threats to Mothers and Babies Network, 20 state, local, and territorial health departments, March 29, 2020 -January 8, 2021 (posted 01 March 2021). medRxiv 2021.02.27.21252169; doi: <https://doi.org/10.1101/2021.02.27.21252169> Link: <https://www.medrxiv.org/content/10.1101/2021.02.27.21252169v1>

medRxiv: McMurphy R, Lenehan P, Awasthi S, et al. Real-time analysis of a mass vaccination effort confirms the safety of FDA-authorized mRNA vaccines for COVID-19 from Moderna and

Pfizer/BioNtech (posted 27 February 2021). medRxiv 2021.02.20.21252134; doi:

<https://doi.org/10.1101/2021.02.20.21252134> Link:

<https://www.medrxiv.org/content/10.1101/2021.02.20.21252134v3>

SSRN: Hyams C, Marlow R, Maseko Z, et al. Assessing the Effectiveness of BNT162b2 and ChAdOx1nCoV-19 COVID-19 Vaccination in Prevention of Hospitalisations in Elderly and Frail Adults: A Single Centre Test Negative Case-Control Study (posted 03 March 2021). Available at SSRN. Link: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3796835

News in Brief

AP: Associated Press. Maria Cheng and Jamey Keaten. WHO: 'Premature,' 'unrealistic' COVID-19 will end soon (01 March 2021). Link: <https://apnews.com/article/pandemics-coronavirus-pandemic-united-nations-c277943cdc46880297c960864027497a>

Atlantic: The Atlantic. Derek Thompson. The Surprising Key to Combatting Vaccine Refusal (28 February 2021). Link: <https://www.theatlantic.com/ideas/archive/2021/02/vaccine-hesitancy-isnt-just-one-thing/618164/>

Atlantic: The Atlantic. Zeynep Tufekci. 5 Pandemic Mistakes We Keep Repeating (28 February 2021). Link: <https://www.theatlantic.com/ideas/archive/2021/02/how-public-health-messaging-backfired/618147>

Businessweek: Bloomberg Businessweek. Thomas Buckley. Vaccine Shipments Present a Security Challenge Worthy of a James Bond Film (02 March 2021). Link: <https://www.bloomberg.com/news/articles/2021-03-02/covid-vaccine-delivery-gets-extreme-secrecy-and-security>

CDC: Centers for Disease Control and Prevention. Weekly U.S. Influenza Surveillance Report (accessed 05 March 2021). Link: <https://www.cdc.gov/flu/weekly/index.htm>

CDC: Centers for Disease Control and Prevention. Zombie preparedness (updated 23 February 2021). Link: <https://www.cdc.gov/cpr/zombie/index.htm>

CIDRAP: Center for Infectious Disease Research and Policy. News Scan for March 01, 2021. (01 March 2021). Link: <https://www.cidrap.umn.edu/news-perspective/2021/03/news-scan-mar-01-2021>

CNN: CNN News. Julia Hollingsworth and Yong Xiong. The truth-tellers (01 March 2021). Link: <https://www.cnn.com/interactive/2021/02/asia/china-wuhan-covid-truth-tellers-intl-hnk-dst/>

COVID Tracking: The COVID Tracking Project. Erin Kissane and Alexis Madrigal. It's Time: The COVID Tracking Project Will Soon Come to an End (01 February 2021). Link: <https://covidtracking.com/analysis-updates/covid-tracking-project-end-march-7>

NMCP COVID-19 Literature Report #62: Friday, 05 March 2021

Tracy C. Shields, MSIS, AHIP (Reference Medical Librarian at NMCP, Library Services)

FDA: US Food & Drug Administration. Coronavirus (COVID-19) Update: FDA Allows More Flexible Storage, Transportation Conditions for Pfizer-BioNTech COVID-19 Vaccine (25 February 2021). Link: <https://www.fda.gov/news-events/press-announcements/coronavirus-covid-19-update-fda-allows-more-flexible-storage-transportation-conditions-pfizer>

FDA: US Food & Drug Administration. FDA Issues Emergency Use Authorization for Third COVID-19 Vaccine (27 February 2021). Link: <https://www.fda.gov/news-events/press-announcements/fda-issues-emergency-use-authorization-third-covid-19-vaccine>

Fierce Biotech: Fierce Biotech. Nick Paul Taylor. Novavax targets May approval for COVID-19 vaccine in the U.S. (02 March 2021). Link: <https://www.fiercebiotech.com/biotech/novavax-targets-may-approval-for-covid-19-vaccine-u-s>

medRxiv: da Silva Francisco, R Jr., Benites LF, Lamarca AP, et al. Pervasive transmission of E484K and emergence of VUI-NP13L with evidence of SARS-CoV-2 co-infection events by two different lineages in Rio Grande do Sul, Brazil (posted 26 January 2021). medRxiv 2021.01.21.21249764; doi: <https://doi.org/10.1101/2021.01.21.21249764> Link: <https://www.medrxiv.org/content/10.1101/2021.01.21.21249764v1>

NatGeo: National Geographic. Natasha Daly. First great apes at U.S. zoo receive COVID-19 vaccine made for animals (03 March 2021). Link: <https://www.nationalgeographic.com/animals/article/first-great-apes-at-us-zoo-receive-coronavirus-vaccine-made-for-animals>

Nature: Nature. Dyani Lewis. Can COVID spread from frozen wildlife? Scientists probe pandemic origins (26 February 2021). Link: <https://www.nature.com/articles/d41586-021-00495-0>

Nature: Nature. Smriti Mallapaty. The search for animals harbouring coronavirus — and why it matters (02 March 2021). Link: <https://www.nature.com/articles/d41586-021-00531-z>

NBC: NBC News. Erika Edwards. Inside 'post-Covid' clinics: How specialized centers are trying to treat long-haulers (01 March 2021). Link: <https://www.nbcnews.com/health/health-news/inside-post-covid-clinics-how-specialized-centers-are-trying-treat-n1258879>

NIH: National Institutes of Health. NIH-Sponsored ACTIV-3 Clinical Trial Closes Enrollment into Two Sub-Studies (04 March 2021). Link: <https://www.nih.gov/news-events/news-releases/nih-sponsored-activ-3-clinical-trial-closes-enrollment-into-two-sub-studies>

NOLA: NOLA.com. Dough MacCash. Photos: Dolly Parton rules the world of Mardi Gras house floats! See 4 Dolly floats here (02 February 2021). Link: https://www.nola.com/multimedia/photos/collection_2e968d16-65a4-11eb-ac65-53db5157fbad.html

NPR: National Public Radio. Jaclyn Diaz. Fauci Donates Personal Coronavirus Model To Smithsonian (03 March 2021). Link: <https://www.npr.org/2021/03/03/973199063/fauci-donates-personal-coronavirus-model-to-smithsonian>

NPR: National Public Radio. Scott Horsley. 'It's Madness': American Factories Scramble To Secure Critical Supplies (03 March 2021). Link: <https://www.npr.org/2021/03/03/972907072/american-factories-are-roaring-back-the-problem-they-cant-find-critical-parts>

NPR: National Public Radio. Rachel Triesman. From 'Jolene' To Vaccine: Dolly Parton Gets COVID-19 Shot She Helped Fund (03 March 2021). Link: <https://www.npr.org/sections/coronavirus-live-updates/2021/03/03/973240792/from-jolene-to-vaccine-dolly-parton-gets-covid-19-shot-she-helped-fund>

ProPublica: ProPublica. Maryam Jameel and Caroline Chen. How Inequity Gets Built Into America's Vaccination System (01 March 2021). Link: <https://www.propublica.org/article/how-inequity-gets-built-into-americas-vaccination-system>

Reuters: Reuters. English health officials say 16 cases of new COVID variant discovered (04 March 2021). Link: <https://www.reuters.com/article/health-coronavirus-britain-variant/english-health-officials-say-16-cases-of-new-covid-variant-discovered-idUSL2N2L22SK>

Reuters: Reuters. Think of others - get a COVID shot, says UK's Queen Elizabeth (26 February 2021). Link: <https://www.reuters.com/article/us-britain-royals-queen/dont-be-selfish-get-a-covid-shot-says-uks-queen-elizabeth-idUSKBN2AQ0U1>

Reuters: Reuters. Nadita Bose and Michael Erman. Biden says will have enough COVID-19 vaccine for every U.S. adult by May (02 March 2021). Link: <https://www.reuters.com/article/us-health-coronavirus-merck-co-johnson-j/biden-says-will-have-enough-covid-19-vaccine-for-every-u-s-adult-by-may-idUSKBN2AU1FN>

Reuters: Reuters. Manojna Maddipatla. Three new Ebola cases confirmed in Congo, two in Guinea (01 March 2021). Link: <https://www.reuters.com/article/health-ebola-congo/update-1-three-new-ebola-cases-confirmed-in-congo-two-in-guinea-idUSL2N2KZ1ZH>

STAT: STATnews. Andrew Joseph and Helen Branswell. The short-term, middle-term, and long-term future of the coronavirus (04 March 2021). Link: <https://www.statnews.com/2021/03/04/the-short-term-middle-term-and-long-term-future-of-the-coronavirus/>

Time: Time. Simon Shuster. 'Tip Of the Iceberg': Interpol Says Fake COVID-19 Vaccines Were Smuggled Across Continents (03 March 2021). Link: <https://time.com/5943581/interpol-face-covid-vaccine/>

Twitter: Twitter. @DollyParton Dolly gets a dose of her own medicine. @VUMChealth <embedded video> (02 March 2021). Link: <https://twitter.com/DollyParton/status/1366866210852323328?s=20>

Vox: Vox. Dylan Scott. 1 simple way to understand how effective the Covid-19 vaccines are (01 March 2021). Link: <https://www.vox.com/22307585/covid-19-vaccine-johnson-and-johnson-efficacy>

WashPo: Washington Post. Ashley Feters. We're having trouble recognizing each other in masks, and it's getting awkward (27 February 2021). Link: <https://www.washingtonpost.com/lifestyle/2021/02/27/masks-recognizing-people-friends/>

WashPo: Washington Post. Jaclyn Peiser and Michelle Boorstein. U.S. bishops splinter on the morality of taking coronavirus vaccines (03 March 2021). Link: <https://www.washingtonpost.com/nation/2021/03/02/archdiocese-new-orleans-johnson-vaccine/>

WashPo: Washington Post. Isaac Stanley-Becker. Johnson & Johnson vaccine deepens concerns over racial and geographic inequities (01 March 2021). Link: <https://www.washingtonpost.com/health/2021/03/01/johnson-and-johnson-vaccine-distribution-disparities/>

WCCO: CBS Minnesota. Kate Raddatz. COVID In Minnesota: MDH Says State Has Seen 14 'Vaccine Breakthrough Cases' (03 March 2021). Link: <https://minnesota.cbslocal.com/2021/03/03/covid-in-minnesota-mdh-says-state-has-seen-14-vaccine-breakthrough-cases/>

WHO: World Health Organization. El Salvador certified as malaria-free by WHO (25 February 2021). Link: <https://www.who.int/news/item/25-02-2021-el-salvador-certified-as-malaria-free-by-who>